

Current Status of Claims

1. *(original)*

A device for directionally guiding articles of different shapes that are being conveyed on a conveyor off the conveyor with the aid of a movable gate that is controllable to turn across the conveyor to an angle relative to

5 direction of movement of the conveyor,

characterised in

- that the gate has at least one rotary motor-driven fully circular disc which is configured to cause the article to be forcibly driven through aid of disc rotation along the gate, in a direction corresponding to the said

10 angle, off the conveyor and to an exit.

2. *(original)*

A device according to claim 1,

characterised in

- that the gate has two motor-driven, rotary and parallel discs

5 rotating in the same rotational direction, wherein the two discs are spaced by a distance that is greater than the largest cross-section of an article to be guided.

3. *(original)*

A device according to claim 2,

characterised in

- that the gate has a central position in which the two discs are

5 parallel to the longitudinal direction of the conveyor to allow articles to pass unobstructed therebetween.

4. *(previously presented)*

A device according to claim 2,
characterised in

- that the two discs are driven by a common drive motor via a
5 common drive shaft, and that the two discs are arranged to be turned
into said angle relative to a common pivot point located centrally above
the conveyor.

5. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one circular disc has a non-vertical axis of
5 rotation.

6. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one circular disc has a horizontal axis of
5 rotation.

7. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one circular disc has a non-horizontal axis of
5 rotation.

8. *(previously presented)*

A device according to claim 1,
characterised in

- that said gate is controllable to assume at least three angularly
5 different positions relative to the movement direction of the conveyor.

9. *(previously presented)*

A device according to claim 1,
characterised in

- that said gate is arranged to assume at least five angularly
5 different positions relative to the movement direction of conveyor.

10. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one circular disc has a speed of rotation which
5 yields a surface speed at a radial location on the disc where the disc
makes contact with the article, said speed being a function of the angle
which the gate turned relative to the direction of movement of the
conveyor.

11. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one circular disc has a speed of rotation which
5 yields a surface speed at a radial location on the disc where the disc
makes contact with the article, said speed being a function of the weight,
size and/or shape of the article.

12. *(previously presented)*

A device according to claim 10,
characterised in

- that the speed of rotation of the circular disc is a function of the
5 movement speed of the conveyor.

13. *(original)*

A device according to claim 12,
characterised in

- that the speed of rotation of the circular disc is equal to or greater
5 than the movement speed of the conveyor.

14. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one rotary and circular disc is designed to cause
5 the article to be given an accelerated movement off the conveyor.

15. *(previously presented)*

A device according to claim 1,
characterised in

- that said at least one rotary and circular disc has a frictional
5 surface.

16. *(previously presented)*

A device according to claim 9,
characterised in

- that the gate is cooperative with a flag device for detecting the
5 angular position of the gate relative to the direction of movement of the
conveyor.

17. *(original)*

A device according to claim 16,
characterised in

- that the flag device is optical, electromagnetic, capacitive or
5 electromechanical.

18. *(previously presented)*

A device according to claim 1,
characterised in

- that the gate is designed, upon turning into a desired angular
5 position, to cause, at the same time, movement of an auxiliary gate
cooperative with the gate and positioned essentially parallel to the gate at
a distance therefrom adapted to be able to pass the article through a space
therebetween.

19. *(previously presented)*

A device according to claim 1,
characterised in

- that a detector device for identifying or detecting any
5 characteristic features or parameters of the article is located upstream of
the gate and adjacent the conveyor.

20. *(original)*

A device according to claim 19,
characterised in

- that the device is, on the basis of said identified or detected
5 features or parameters, designed to control the gate to assume a desired angular position relative to the conveyor.

21. *(previously presented)*

A device according to claim 18,
characterised in

- that device is, on the basis of said identified or detected features
5 or parameters, designed to control the speed of rotation of the at least one disc relative to the movement speed of the conveyor and or the angular position of the gate relative to the conveyor.

22. *(previously presented)*

A device according to claim 1,
characterised in

- that the gate is designed to guide articles to said exit, wherein
5 said exit is, with the aid of the controllable gate, selectable from among at least a first and a second exit.

23. *(original)*

A device according to claim 22,
characterised in

- that at least one of said first and second exits is associated with
5 an post-treatment unit for the article with subsequent storage container or conveyor.

24. *(original)*

A device according to claim 23,
characterised in

- that said exit cooperates with a storage container.

25. *(original)*

A device according to claim 23,
characterised in

- that the post-treatment unit is a compactor or a disintegrator.

26. *(previously presented)*

A device according to claim 23,
characterised in

- that the post-treatment unit for said first and said second exits
5 respectively are constructed differently, but are driven by a common
drive unit.

27. *(previously presented)*

A device according to claim 1,
characterised in

- that gate is designed for sorting articles in the form of empties,
5 for example, bottles or cans.

28. *(new)*

A device according to claim 11,
characterised in

- that the speed of rotation of the circular disc is a function of the
5 movement speed of the conveyor.

29. (*new*)

A device according to claim 11,
characterised in

- that the speed of rotation of the circular disc is equal to or greater
5 than the movement speed of the conveyor.

30. (*new*)

A device according to claim 10,
characterised in

- that the gate is cooperative with a flag device for detecting the
5 angular position of the gate relative to the direction of movement of the
conveyor.

31. (*new*)

A device according to claim 10,
characterised in

- that the flag device is optical, electromagnetic, capacitive or
5 electromechanical.

32. (*new*)

A device according to claim 19,
characterised in

- that device is, on the basis of said identified or detected features
5 or parameters, designed to control the speed of rotation of the at least one
disc relative to the movement speed of the conveyor and or the angular
position of the gate relative to the conveyor.

33. (*new*)

A device according to claim 25,
characterised in

- that the post-treatment unit for said first and said second exits
5 respectively are constructed differently, but are driven by a common
drive unit.